WEST Search History

Hide Items	Restore	Clear	Cancel	

DATE: Saturday, October 28, 2006

Hide?	Set Name	Query	Hit Count
	DB=PGPB	,USPT,USOC,EPAB,JPAB,DWPI; PLUR=YE	ES; OP=ADJ
Γ	L7	express\$3 same L2	. 1
Γ	L6	express\$5 same L2	1
	L3	T7 same L2	12
Γ	L2	(RNA adj polymerase) same L1	43
<u></u>	Ll	(polynucleotide adj phosphorylase)	289

END OF SEARCH HISTORY

=> index bioscience medicine

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE, AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS, CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB, DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 17:31:51 ON 28 OCT 2006

71 FILES IN THE FILE LIST IN STNINDEX

```
=> S ((polynucleotide (w)Phosphorylase)or PNPase)
    22 FILE AGRICOLA
    5 FILE ANABSTR
```

- 3 FILE AQUASCI
- 31 FILE BIOENG
- 518 FILE BIOSIS
- 66 FILE BIOTECHABS
- 66 FILE BIOTECHDS
- 170 FILE BIOTECHNO
- 28 FILE CABA
- 1276 FILE CAPLUS
- 9 FILE CEABA-VTB
- 11 FILE CONFSCI
- 66 FILE DDFB
- 16 FILE DDFU
- 159 FILE DGENE
- 49 FILE DISSABS
- 66 FILE DRUGB
- 21 FILE DRUGU
- 5 FILE EMBAL
- 362 FILE EMBASE
- 186 FILE ESBIOBASE

30 FILES SEARCHED...

- 2 FILE FROSTI
- 7 FILE FSTA
- 214 FILE GENBANK
- 28 FILE IFIPAT
- 17 FILE JICST-EPLUS
- 253 FILE LIFESCI
- 637 FILE MEDLINE
- 5 FILE NTIS
- 164 FILE PASCAL
- 15 FILE PHAR
- 492 FILE SCISEARCH
- 143 FILE TOXCENTER
- 209 FILE USPATFULL
- 13 FILE USPAT2
- 1 FILE VETU
- 60 FILE WPIDS
- **60 FILE WPINDEX**
- 68 FILES SEARCHED...
 - 1 FILE NLDB

39 FILES HAVE ONE OR MORE ANSWERS, 71 FILES SEARCHED IN STNINDEX

L1 QUE ((POLYNUCLEOTIDE (W) PHOSPHORYLASE) OR PNPASE)

=> d rank

- Fl 1276 CAPLUS
- F2 637 MEDLINE
- F3 518 BIOSIS
- F4 492 SCISEARCH
- F5 362 EMBASE
- F6 253 LIFESCI
- F7 214 GENBANK F8 209 USPATFULL
- F9 186 ESBIOBASE
- F10 170 BIOTECHNO

F11 164 PASCAL F12 159 DGENE 143 TOXCENTER F13 F14 66 BIOTECHABS 66 BIOTECHDS F15 F16 66 DDFB 66 DRUGB F17 60 WPIDS F18 60 WPINDEX F19 F20 49 DISSABS F21 31 BIOENG F22 28 CABA F23 28 IFIPAT F24 22 AGRICOLA 21 DRUGU F25 17 JICST-EPLUS F26 F27 16 DDFU F28 15 PHAR F29 13 USPAT2 F30 11 CONFSCI F31 9 CEABA-VTB 7 FSTA F32 5 ANABSTR F33 5 EMBAL F34 F35 5 NTIS F36 3 AQUASCI F37 2 FROSTI F38 1 VETU F39 1 · NLDB

=> file f1-f6, f8-f11, f13

FILE 'CAPLUS' ENTERED AT 17:34:20 ON 28 OCT 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'MEDLINE' ENTERED AT 17:34:20 ON 28 OCT 2006

FILE 'BIOSIS' ENTERED AT 17:34:20 ON 28 OCT 2006 Copyright (c) 2006 The Thomson Corporation

FILE 'SCISEARCH' ENTERED AT 17:34:20 ON 28 OCT 2006 Copyright (c) 2006 The Thomson Corporation

FILE 'EMBASE' ENTERED AT 17:34:20 ON 28 OCT 2006 Copyright (c) 2006 Elsevier B.V. All rights reserved.

FILE 'LIFESCI' ENTERED AT 17:34:20 ON 28 OCT 2006 COPYRIGHT (C) 2006 Cambridge Scientific Abstracts (CSA)

FILE 'USPATFULL' ENTERED AT 17:34:20 ON 28 OCT 2006 CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'ESBIOBASE' ENTERED AT 17:34:20 ON 28 OCT 2006 COPYRIGHT (C) 2006 Elsevier Science B.V., Amsterdam. All rights reserved.

FILE 'BIOTECHNO' ENTERED AT 17:34:20 ON 28 OCT 2006 COPYRIGHT (C) 2006 Elsevier Science B.V., Amsterdam. All rights reserved.

FILE 'PASCAL' ENTERED AT 17:34:20 ON 28 OCT 2006 Any reproduction or dissemination in part or in full, by means of any process and on any support whatsoever is prohibited without the prior written agreement of INIST-CNRS. COPYRIGHT (C) 2006 INIST-CNRS. All rights reserved.

FILE TOXCENTER' ENTERED AT 17:34:20 ON 28 OCT 2006 COPYRIGHT (C) 2006 ACS

=> S L1

L2 4410 L1

=> S express? (s) L2

350 EXPRESS? (S) L2

=> S purif? (s) L3

19 PURIF? (S) L3 1.4

=> S (tag or his or GST or T7CBD or Trx or flag) (s) L4

6 (TAG OR HIS OR GST OR T7CBD OR TRX OR FLAG) (S) L4

=> S (tag or his or GST or T7CBD or Trx or flag) (s) L3

8 (TAG OR HIS OR GST OR T7CBD OR TRX OR FLAG) (\$) L3

=> S (tag or his or GST or T7or CBD or Trx or flag) (s) L3

8 (TAG OR HIS OR GST OR T7OR CBD OR TRX OR FLAG) (S) L3

=> s polymerase (s) L4

L8 3 POLYMERASE (S) L4

=> s polymerase (s) L7

3 POLYMERASE (S) L7

=> dup rem 17

PROCESSING COMPLETED FOR L7

5 DUP REM L7 (3 DUPLICATES REMOVED)

=> d ibib abs 110 1-5

L10 ANSWER 1 OF 5 USPATFULL on STN

ACCESSION NUMBER: 2006:195560 USPATFULL << LOGINID::20061028>>

TITLE: Process for producing pnpase

INVENTOR(S): Murai, Masatoshi, Hyogo, JAPAN

NUMBER KIND DATE

PATENT INFORMATION: US 2006166315 A1 20060727

APPLICATION INFO.: US 2003-540145 A1 20031225 (10)

WO 2003-JP16653 20031225

20050621 PCT 371 date

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: GREENBERG TRAURIG, LLP, MET LIFE BUILDING, 200 PARK

AVENUE, NEW YORK, NY, 10166, US

NUMBER OF CLAIMS: 19

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 3 Drawing Page(s)

LINE COUNT: 695

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The invention provides a process for producing ***PNPase***, wherein

PNPase can be produced easily with high efficiency, and problematic contamination with endotoxin in synthesis of a nucleic acid

polymer as a raw material of pharmaceutical preparations can be reduced. ***PNPase*** is produced by Escherichia coil or the like having a T7

RNA polymerase gene, transformed with an ***expression*** vector

having a ***PNPase*** gene and a T7 promoter ligated therein. For

further facilitating the step of purifying ***PNPase***, an
expression vector having a ***tag*** gene is utilized and

the culture time is prolonged.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L10 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2004:570017 CAPLUS << LOGINID::20061028>>

DOCUMENT NUMBER:

141:102243

TITLE:

Bacterial expression of PNPase and use in

polynucleotide synthesis INVENTOR(S): Murai, Masatoshi

PATENT ASSIGNEE(S): Nippon Shinyaku Co., Ltd., Japan

SOURCE:

PCT Int. Appl., 26 pp.

CODEN: PIXXD2

DOCUMENT TYPE: LANGUAGE:

Patent

Japanese FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

KIND DATE

APPLICATION NO.

DATE 20031225

WO 2004058959 A1 20040715 WO 2003-JP16653

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,

CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,

GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,

LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,

TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,

ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,

TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG AU 2003292772 A1 20040722 AU 2003-292772 20031225

20031225 A1 20051005 EP 2003-768192 EP 1582584

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

Al 20060727 US 2005-540145 US 2006166315 20050621 A 20021226 PRIORITY APPLN. INFO.: JP 2002-376780

WO 2003-JP16653 W 20031225

AB The invention provides a process for highly efficiently and conveniently producing polynucleotide phosphorylase (PNPase) while reducing contamination with endotoxins causing problems in synthesizing a nucleic acid polymer, useful as drug synthesis starting material. PNPase is produced using Escherichia coli, etc. having a T7 RNA polymerase gene which has been transformed with an expression vector carrying a PNPase gene and a T7 promoter ligated together. Moreover, the step of purifying ***PNPase*** is simplified by using an ***expression*** vector

having a ***tag*** gene or prolonging the culture time.

Expression of Escherichia coli ***PNPase*** with ***His***

tag with reduced endotoxin contamination is described. Synthesis of polyinosinic acid (av. yield 50%, chain length 2200 bp) using the recombinant PNPase from inosine diphosphate trisodium salt and polycytidylic acid (av. yield 65%, chain length 2200 bp) from cytidine diphosphate trisodium salt was accomplished.

L10 ANSWER 3 OF 5 USPATFULL on STN

ACCESSION NUMBER: 2004:217827 USPATFULL <<LOGINID::20061028>>

Cathepsin V-like polypeptides TITLE:

Tang, Y. Tom, San Jose, CA, United States INVENTOR(S):

Goodrich, Ryle W., Los Angeles, CA, United States Asundi, Vinod, Foster City, CA, United States

Drmanac, Radoje T., Palo Alto, CA, United States

PATENT ASSIGNEE(S): Nuvelo, Inc., Sunnyvale, CA, United States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 6783969 B1 20040831 APPLICATION INFO.: US 2001-799451 20010305 (9)

DOCUMENT TYPE: Utility

GRANTED

FILE SEGMENT: PRIMARY EXAMINER: Myers, Carla J.

NUMBER OF CLAIMS: 3

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT: 7745

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides novel nucleic acids, novel polypeptide sequences encoded by these nucleic acids and uses thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
1999-0215139 PASCAL <<LOGINID::20061028>>
ACCESSION NUMBER:
                           Copyright .COPYRGT. 1999 INIST-CNRS. All rights
COPYRIGHT NOTICE:
              reserved.
                         ISOLATION AND CHARACTERIZATION OF THE GENE CODING FOR
TITLE (IN ENGLISH):
              A PUTATIF POLYNUCLEOTIDE PHOSPHORYLASE THAT CONTAINS A
              BINDING DOMAIN FOR TBP (TATA-BINDING PROTEIN)
TITLE (IN FRENCH):
                        ISOLEMENT ET CARACTERISATION D'UN GENE D'ARABIDOPSIS
              CODANT POUR UNE POLYNUCLEOTIDE PHOSPHORYLASE PUTATIVE
              INTERAGISSANT AVEC TBP (TATA-BINDING PROTEIN)
AUTHOR:
                    KIM Yeon-Jung; MACHE Regis (dir.)
CORPORATE SOURCE:
                            Universite de Grenoble 1, Saint-Martin-d'Heres, France
              (tutelle)
SOURCE:
                    (1998-10), 150 refs.
              136 p.
              Dissertation Information: Universite de Grenoble 1.
              Saint-Martin-d'Heres. FRA, Th. doct., 98GRE10171
DOCUMENT TYPE:
                         Dissertation
BIBLIOGRAPHIC LEVEL: Monographic
COUNTRY:
                     France
LANGUAGE:
                      French
SUMMARY LANGUAGE:
                              French; English
                        INIST-T 123317, T98GRE10171 0000; RBCCN-384212103,
AVAILABILITY:
              T98GRE10171 0000
AN 1999-0215139 PASCAL <<LOGINID::20061028>>
CP Copyright .COPYRGT. 1999 INIST-CNRS. All rights reserved.
ABFR L'ARN polymerase II, l'enzyme core responsable de la synthese des ARNm
   chez les eucaryotes, exige des facteurs supplementaires pour l'initiation
   de la transcription (facteurs generaux de transcription : TFIIA, TFIID,
   TFIIF, TFIIE, TFIIH et TFIIJ). L'assemblage du complexe d'initiation de
   la transcription au niveau des elements promoteurs debute par le
   recrutement du facteur TFIID, qui est un facteur d'initiation essentiel
   constitue de la proteine de liaison a la boite TATA (TBP) et de plusieurs
   facteurs associees a TBP. Ces derniers sont appeles TAFs et certains
   semblent agir egalement comme coactivateurs qui modulent la regulation
   transcriptionnelle en interagissant avec divers activateurs ou
   represseurs transcriptionnels. Le but de ce travail consistait a
   rechercher des proteines qui interagiraient avec la proteine TBP2
   d'Arabidopsis. Les connaissances actuelles concernant la composition du
   complexe d'initiation de la transcription par l'ARN polymerase II etaient
   limitées aux systemes humains, de Drosophiles ou de levures. Peu
   d'information etait disponible concernant le systeme vegetal a
   l'exception de certaines proteines TBP isolees chez quelques especes.
   Nous avions utilise le systeme double hybride de la levure pour cribler
   une banque d'ADNc d'A. thaliana et un clone positif a ete finalement
   isole. L'ADNc ainsi isole a ete introduit dans un vecteur d'
    ***expression*** d'E. coli pour une surproduction de la proteine sous
   forme de fusion a la ***GST*** . L'analyse de l'interaction
   proteine-proteine in vitro en utilisant la proteine (TIP: TBP
   Interacting Polypeptide) surexprimee et la proteine cible TBP fusionnee a
   un enchainement d'histidine a confirme l'interaction directe entre TIP et
   TBP. Une experience de gel retard a prouve que TIP empeche TBP2 de se
   lier a la boite TATA in vitro. Afin de trouver le gene et l'ADNc complet,
   une banque genomique et une deuxieme banque d'ADNc ont ete criblees avec
   le fragment d'ADNc precedemment isole comme sonde. Un fragment d'ADN
   d'approximativement 7 kb contenant le gene entier, et un ADNc, codant une
   proteine d'environ 110 kDa, ont ete obtenus et sequences. La comparaison
   de sequence utilisant le logiciel BLAST a revele une forte homologie avec
   la ***PNPase*** d'E. coli ( ***polynucleotide**
      **phosphorylase*** ) au niveau du domaine N-terminal de la proteine.
    Mais le domaine C-terminal contenant l'activite de liaison a TBP ne
    montre aucune similitude particuliere avec d'autres proteines. Nous avons
    montre, par co-immunoprecipitation, que cette proteine complete interagit
    avec TBP in vitro. En outre, le resultat d'une analyse de RNase
    protection indique que le gene est transcrit constitutivement en un ARNm
    presentant un intron non episse (retention d'intron). Cet ARNm
    incompletement episse semble coder pour la proteine tronquee, ce qui est
    du a la presence de codons stop dans l'intron. L'epissage de cet intron
```

semble etre regule de facon tissu-specifique et par des stress

L10 ANSWER 4 OF 5 PASCAL COPYRIGHT 2006 INIST-CNRS. ALL RIGHTS RESERVED. on

STN

environnementaux : c'est a dire que l'ARNm completement episse est trouve seulement dans les graines et les siliques et dans les plantes traitees au froid. Base sur l'ensemble des resultats, l'implication de la proteine ainsi identifiee dans la regulation de l' ***expression*** des genes

L10 ANSWER 5 OF 5 LIFESCI COPYRIGHT 2006 CSA on STN DUPLICATE 2

ACCESSION NUMBER: 96:73885 LIFESCI <<LOGINID::20061028>> Proteins associated with RNase E in a multicomponent

ribonucleolytic complex

Miczak, A.; Kaberdin, V.R.; Wei, Chia-Li; Lin-Chao, Sue*

AUTHOR: CORPORATE SOURCE: Inst. Mol. Biol., Academia Sinica, Nankang Taipei, Taiwan

11529

PROC. NATL. ACAD. SCI. USA, (1996) vol. 93, no. 9, pp. SOURCE:

> 3865-3869. ISSN: 0027-8424.

DOCUMENT TYPE: Journal

FILE SEGMENT: N; J

LANGUAGE: English

SUMMARY LANGUAGE: English

AB The Escherichia coli endoribonuclease RNase E is essential for RNA processing and degradation. Earlier work provided evidence that RNase E exists intracellularly as part of a multicomponent complex and that one of the components of this complex is a 3'-to-5' exoribonuclease,

polynucleotide ***phosphorylase*** (EC 2.7.7.8). To isolate and identify other components of the RNase E complex, ***FLAG*** -epitope-tagged RNase E (***FLAG*** -Rne) fusion protein was purified on a monoclonal antibody-conjugated agarose column. The ***FLAG*** -Rne fusion protein, eluted by competition with the synthetic ***FLAG*** peptide, was found to be associated with other proteins. N-terminal sequencing of these proteins revealed the presence in the RNase E complex not only of ***polynucleotide*** ***phosphorylase*** but also of DnaK, RNA helicase, and enolase (EC 4.2.1.11). Another protein associated only with epitope-tagged temperature-sensitive (Rne-3071) mutant RNase E but not with the wild-type enzyme is GroEL. The ***FLAG*** -Rne complex has RNase E activity in vivo and in vitro. The relative amount of proteins associated with wild-type and Rne-3071 ***expressed*** at an elevated temperature differed.

=> d his

QUE ((POLYNUCLEOTIDE (W) PHOSPHORYLASE) OR PNPASE) Ll

FILE 'CAPLUS, MEDLINE, BIOSIS, SCISEARCH, EMBASE, LIFESCI, USPATFULL, ESBIOBASE, BIOTECHNO, PASCAL, TOXCENTER' ENTERED AT 17:34:20 ON 28 OCT 2006

- L2 4410 S L1
- 350 S EXPRESS? (S) L2 L3
- 19 S PURIF? (S) L3 L4
- L5 6 S (TAG OR HIS OR GST OR T7CBD OR TRX OR FLAG) (S) L4
- 8 S (TAG OR HIS OR GST OR T7CBD OR TRX OR FLAG) (S) L3 L6
- 8 S (TAG OR HIS OR GST OR T7OR CBD OR TRX OR FLAG) (S) L3 L7
- 3 S POLYMERASE (S) L4 L8
- L9 3 S POLYMERASE (S) L7
- 5 DUP REM L7 (3 DUPLICATES REMOVED) 1.10

=> log y

ExPASy Home page	Site Map	Search ExPASy	Contact us	Swiss-Prot	ENZYME
Search ENZYME		▼ for		Go Clear	

NiceZyme View of ENZYME: EC 2.7.7.8

Official Name

Polyribonucleotide nucleotidyltransferase.

Alternative Name(s)

Polynucleotide phosphorylase.

Reaction catalysed

RNA(n+1) + phosphate <=> RNA(n) + a nucleoside diphosphate

Comment(s)

ADP, IDP, GDP, UDP and CDP can act as donors.

Cross-references

Biochemical

Pathways; map

H1; H2; J7; K7; J8; K8

number(s)

BRENDA

2.7.7.8

PUMA2

2.7.7.8

PRIAM enzyme-

specific profiles

2.7.7.8

KEGG Ligand

Database for

Enzyme

2.7.7.8

Nomenclature

IUBMB Enzyme

Nomenclature

2.7.7.8

IntEnz

2.7.7.8

MEDLINE

Find literature relating to 2.7.7.8

MetaCyc

2.7.7.8

UniProtKB/Swiss-

P50849, PNP_BACSU;

Q8TCS8, PNPT1_HUMAN;

O5RCW2, PNPT1_PONPY;

Q8K9H5, PNP_BUCAP;

Q89AF8, PNP_BUCBP;

Q8K1R3, PNPT1_MOUL P57454, PNP_BUCAI; PSEPU;

P44584, PNP_HAEIN; Q9ZD43, PNP_RICPR;

P41121, PNP_PHOLU;

Prot

034275, PNP_YEREN;

View entry in original ENZYME format View entry in raw text format (no links)

All UniProtKB/Swiss-Prot entries referenced in this entry, with possibility to download in

٦

K ENZYME: 2.7.7.8

Help

```
EC
Entry
           2.7.7.8
                                     Enzyme
Name
           polyribonucleotide nucleotidyltransferase;
          polynucleotide phosphorylase;
           PNPase:
           nucleoside diphosphate:polynucleotidyl transferase;
           polyribonucleotide phosphorylase
           Transferases
Class
           Transferring phosphorus-containing groups
          Nucleotidyltransferases
          polyribonucleotide:phosphate nucleotidyltransferase
Sysname
Reaction
           RNA(n+1) + phosphate = RNA(n) + a nucleoside diphosphate
(IUBMB)
           [RN:R07282]
           R07282 > R00437 R00438 R00439 R00440
Reaction
(KEGG)
            Show all J
Substrate
           RNAn+1 [CPD:C00046];
           phosphate [CPD:C00009]
           RNAn [CPD:C00046];
Product
           nucleoside diphosphate [CPD:C00454]
Comment
           ADP, IDP, GDP, UDP and CDP can act as donors.
Pathway
           PATH: map00230
                           Purine metabolism
           PATH: map00240 Pyrimidine metabolism
Ortholog
           KO: K00962 polyribonucleotide nucleotidyltransferase
Genes
           HSA: 87178(PNPT1)
           PTR: 459247
           MMU: 71701(Pnpt1)
           RNO: 360992 (Pnpt1)
           CFA: 481376 (LOC481376)
           GGA: 421206 (PNPT1)
           DME: Dmel_CG11337
           CEL: BE0003N10.1
          ATH: At5g14580 (T15N1.70)
           CME: CMH146C CMQ324C
           CAL: orf19.1578(RRP5)
           ECO: b3164(pnp)
           ECE: Z4525 (pnp)
           ECS: ECs4045
           ECC: c3920(pnp)
           ECI: UTI89_C3594(pnp)
          ECP: ECP_3252
           STY: STY3463 (pnp)
           STT: t3200(pnp)
           SPT: SPA3149(pnp)
           SEC: SC3223 (pnp)
           STM: STM3282 (pnp)
           YPE: YPO3490(pnp)
```